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| APPLICATION NO.   | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO.            | CONFIRMATION NO.       |
|---|-------------|----------------------|--------------------------------|------------------------|
| 10/759,678  | 01/16/2004  | B. Raghay Reddy      | HES 2003-IP-011937U1           | 8611                   |
| 28857   | 7590        | 07/13/2007           |                                |                        |
| CRAIG W. RODDY<br>HALLIBURTON ENERGY SERVICES<br>P.O. BOX 1431<br>DUNCAN, OK 73536-0440 |             |                      | EXAMINER<br>MARCANTONI, PAUL D |                        |
|   |             |                      | ART UNIT<br>1755               | PAPER NUMBER           |
|   |             |                      | MAIL DATE<br>07/13/2007        | DELIVERY MODE<br>PAPER |

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

|                              |                               |                              |  |
|------------------------------|-------------------------------|------------------------------|--|
| <b>Office Action Summary</b> | Application No.<br>10/759,678 | Applicant(s)<br>REDDY ET AL. |  |
|                              | Examiner<br>Paul Marcantoni   | Art Unit<br>1755             |  |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 07 May 2007.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-28, 30-39 and 123-191 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-28, 30-39, and 123-191 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

Applicant's arguments filed 5/7/07 have been fully considered but they are not persuasive.

Obviousness-Type Double Patenting (withdrawn):

The applicants petition to withdraw the terminal disclaimer was dismissed. Therefore, the terminal disclaimer is still active and the ODP rejection has been again withdrawn because of this dismissal.

Objection to the Specification (withdrawn):

The objection to the specification has been withdrawn. The applicants state that an activator is *substantially similar* to what are referred to as accelerators (p.14 of 20 of 5/7/07 response). The definition provided by applicants is vague. The examiner does not understand exactly what is meant by these terms. Nevertheless, he has interpreted "activator" and "accelerator" to be *synonymous terms* for the purpose of the examination of this instant application. The applicants have also stated that accelerator is generally used to refer to a particular cement composition not comprising a retarder. However, there are many patents that do use accelerator and retarder in the same composition and do not use the term "activator". Nevertheless, applicants are permitted to an extent to be their own lexicographer and the examiner thus has interpreted activator and accelerator to have the same meaning.

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35 USC 102/103:

Claims 1-28, 30-39, and 123-191 are rejected under 35 USC 102(a) and (b) as anticipated, or in the alternative, under 35 USC 103(a) as obvious over Smith et al. '939 or Booth '407 alone or in view of Vijn et al. '488 or Yamashita et al. '418, Laramay et al. '318, Scheetz et al. (abstract), or McCurrich (US Patent No. 4,131,480).

The primary references above teach adding a cationic polymer to cement. The prior art cationic polymer is the same as applicants' cationic polymer and thus would also function as their particle size distribution adjusting agent. The applicants particle size distribution adjusting agent is essentially new words for defining what is already old in the art. Namely, this PSDA agent is actually a flocculent or flocculating agent which causes particles in suspension to floc together or agglomerate (see page 7, line 8 of applicants' specification). The activator or activating agent reads upon either water (which activates the hydraulic activity of cement) or an accelerator which accelerates and activates the rapid setting of cement. Note that in claim 1 applicants do not specify or define any specific activators and though they may mean accelerator by the use of the term activator, water is the only ingredient which imparts the hydraulic activity to cement and starts the hydraulic reaction for hardening and setting of the cement.

The use of a retarder is *conventional* and well known in cement compositions to retard or delay the setting of cement. Vijn et al. '488 teaches in column 4, lines 24-35 that the addition of a retarder to cements for applications such as well cements is known and conventional in the art. Vijn also teach adding dispersing agents, defoamers, silica

flour, formation conditioning additives, expansion aids, set accelerators (activators), weighting agents, lightening agents such as fly ash or fumed silica (see col.4 lines 10-16 and col.5, lines 1-20).

Yamashita et al. '418 teach *conventional* additives to cement compositions include retarders such as phosphonic acids and their derivatives (col.17, line 25), high early strength agents (ie accelerators or as applicants name them activators) such as KOH or NaOH (col.17, lines 35-40) as well as alkanolamines, surfactants (same as surface active agents-see col.18, line s 35-55), thickeners (same as viscosifiers-see col.19, line 3), silica fume, fly ash, etc. Yamashita et al. further teach these additives may be added in plural (col.19, line 9).

Laramay et al. '318 teach adding *conventional* additives to cement compositions such as fluid loss additives, viscosifiers, retarders, accelerators (ie activators), dispersants, weight adjusting agents, fillers, (see col.10, lines 25-30), surfactants (col.11, line 14), fly ash, silica flour etc. (col.11, lines 20-23). It would have been an obvious design choice for one of ordinary skill in the art to add conventional cement additives of Laramay et al. '318, Vijn et la. '488, and Yamashita et al. '418 to cement compositions such as those of the primary references because these are routinely used in the art.

Scheetz and McCurrich '480 et al. teach the addition of sulfonated naphthalene condensate is old in the cement art as an additive because it is a conventionally used superplasticizer (dispersant) for improving the pumpability of the cement slurry (see abstract). The applicants call this component a "yield stress reducing agent" but it is

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better known in the art as a superplasticizer (or dispersant) which are conventional additives to improve cement pumpability.

Response:

The examiner appreciates and acknowledges applicants' amendments especially their insertion of "penetrated by a wellbore" into all independent claims to simplify prosecution and reduce the number of references. All references no longer recited above in the 102/103 have been withdrawn. The 102 rejection over Yamashita has been withdrawn also because it does not teach well cementing or wellbore cementing. Smith et al. '939 and Booth '407 are the remaining primary references and still relate to well cementing processes. Smith et al. teach treating a subterranean formation for well cementing. Booth teach filling subterranean cavities and a wellbore still falls under this category of subterranean cavities.

The examiner notes that the secondary references were used in the 102/103 rejection to show that additives such as retarders and dispersants (yield stress reducing agent as labeled by applicants) are conventional additives to cement. The purpose for adding a retarder is to delay the setting of cement and thus by adding a retarder the cement would remain in a slurry state and this would have been understood by one of ordinary skill in the art. Adding an activator or accelerator would lead to the setting of the cement and the cement would no longer be in a slurry state but moving towards a hardened and setting material.

It is the examiner's position that he has responded to an addressed applicants' arguments and the finality of this office action is now proper. The applicants addition of


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many new claims necessitated the grounds of rejection (the same prior art rejection) over those claims.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Paul Marcantoni whose telephone number is 571-272-1373. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Paul Marcantoni  
Primary Examiner  
Art Unit 1755